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RIPARIAN AQUATIC INFORMATION DATA SUMMARY

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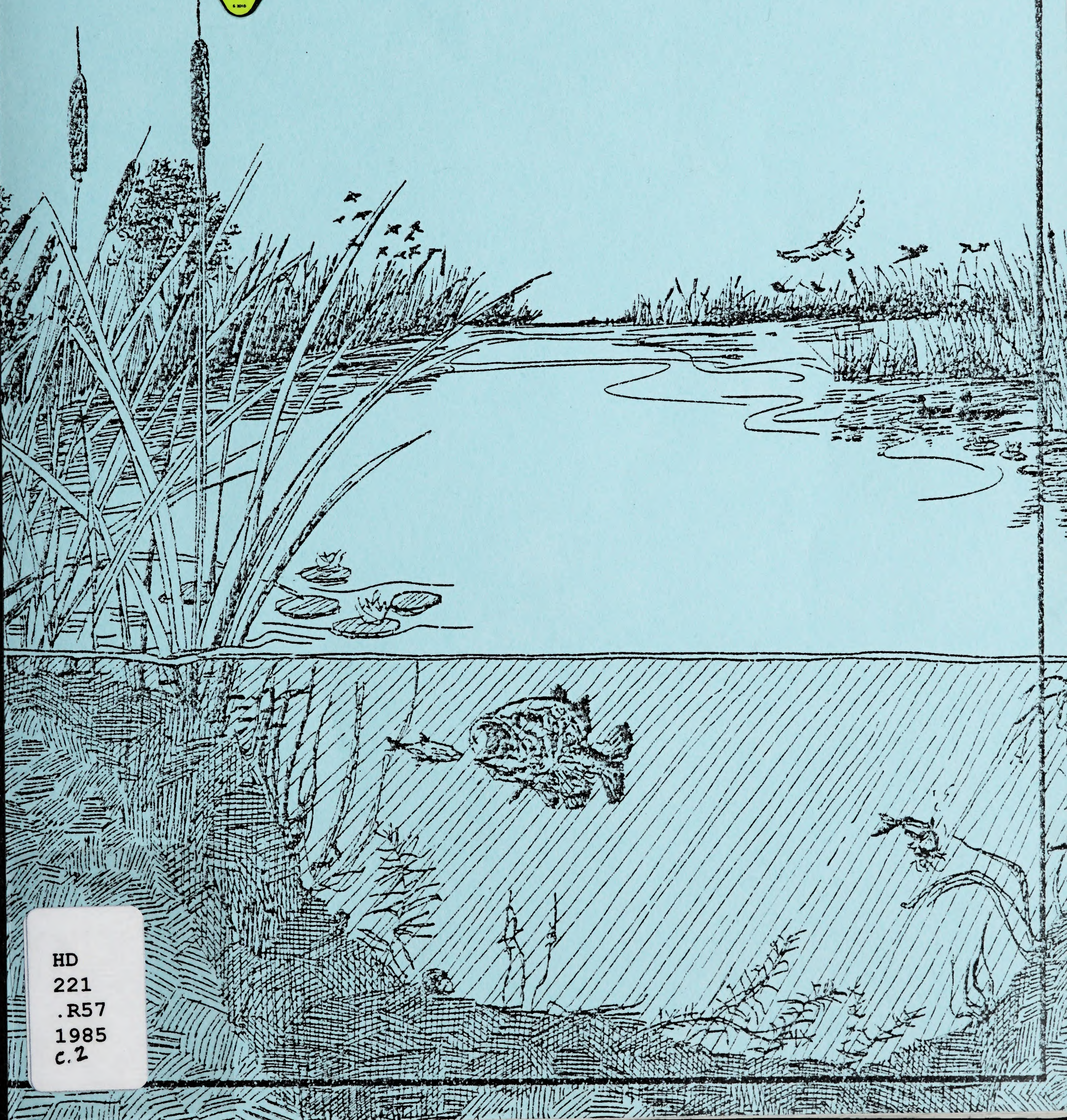

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EXPANDED FIELD
INSTRUCTIONS FOR COMPLETING
RIPARIAN/AQUATIC
INFORMATION DATA SUMMARY

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INTRODUCTION

The Riparian/Aquatic portion of BLM's Wildlife Information System is designed to be used as a summary analysis of site specific data to provide information to the public land manager. The data input form (Form 6602-9) provides for the recording of the biologist's analysis of data which may be either limited or extended over a period of time. There may be additional data on each individual stream segment or lake stored in the office files.

Once the data has been summarized and entered into the computer data base, it can be easily retrieved and used for preparing of Land Use Plans, RMPs, EISs, EAs and for responding to public inquiries and other information requests.

The information in the data base allows for analyzing and arraying alternatives and summarizing them in a concise manner.

INVENTORY INPUT INTO THE DATA BASE

Riparian/Aquatic inventory data is gathered by a variety of field methods and at various levels of intensity. That data is then interpreted and summarized by the biologist for entry into the data base. Some of the field inventory methods that might be used to gather the initial data might include: (1) Stream Transect Method, (2) BLM MS 6671 Stream Survey, (3) Fish & Wildlife Agency Inventory, (4) Stream Habitat Inventory Profile, or (5) Others.

STREAM SEGMENT, LAKES, PONDS, RESERVOIRS

A Stream segment is a homogeneous reach of stream, which can vary in length from less than 1/4 mile to several miles. The amount of homogeniety is determined by the intensity of the inventory. For example, a low land, pastoral, meandering stream may be homogeneous for several miles based upon the data gathered by an extensive inventory method. However, the homogeneous segments of the same stream may be significantly shorter in length when more detailed information is collected with an intensive inventory method.

To identify stream segment locations, stream miles begin at zero at the mouth of a stream and the miles are numbered consecutively upstream.

Lakes, ponds, and reservoirs are located in the data base by the geographic location of their outlet. The perimeter of the water body will be entered into the geographic information system by reference to maps and airphotos.

The acreage of riparian vegetation adjacent to the stream segment or around the perimeter of a water body is recorded. The percent herbaceous vegetation, shrubs, and trees and the percent bare ground is also recorded. The structure or height of individual plant species can be interpreted from the dominant and subdominant trees and shrubs listed. The potential natural vegetation in percent of herbaceous vegetation, shrubs, trees and bare soil is estimated by the biologist in comparison with the existing conditions.

A dichotomus key in southeastern Oregon which assists in determining potential natural vegetation was developed by Crouse & Kindschy in 1981. The concept is useful for determining potential natural vegetation for any riparian site. Their key is reproduced on the following pages as a reference.

COMPLETING THE INPUT FORMS AND THE EDITS

The instructions beginning on page 8 will assist in correctly completing each entry on Form 6602-9. When the forms are complete, they are submitted to the Service Center for key-entry. After the data has been keyed, it is edited against defined criteria, such as the use of proper codes in each field, to assure the validity of the data to be stored. The origional forms and a verification list are returned to the originating biologist. The verification list will show all data that has been entered and any errors detected by the computer will be marked. After any necessary corrections have been made by the originator, the Service Center will create an ASPEN/2 data base ready for the user to query. This data base will be made available either as a timesharing file on the mainframe or in a data base for use on a microcomputer, depending on the equipment available at the field office. Procedures are also established which permit the updating of the data as necessary.

KEY FOR ASSESSING RIPARIAN VEGETATION POTENTIAL OF STREAMS

1a. Stream flow intermittent

2a. Water not in soil all year...Mullein, low sagebrush, biscuit root.

2b. Water in soil all year.

3a. Stream gradient less than 1%; dry in mid-summer except for isolated pools...Dense mats of sedges, grasses, and forbs around pools; few or no woody species.

3b. Stream gradient greater than 1%... Herbaceous sage, mullein, sparse willow and other shrubs.

1b. Stream flow perennial

4a. Stream flow does not vary seasonally (springfed)

5a. Soil highly alkaline...Alkali bullrush, greasewood, buffaloberry, salt cedar.

5b. Soil not highly alkaline... Densely matted sedges, forbs, grasses, cattails; few or no woody species.

4b. Stream flow varies seasonally

6a. Water level fluctuations extreme; severe scouring common...Vegetation limited to sparse stands of grasses, forbs and sedges; woody plants found only in areas protected from scouring.

6b. Water level fluctuations moderate

7a. Soil extremely rocky; gradient generally greater than 5%...Narrow band of willow, mock orange, chokecherry, sparse stands of grasses and forbes.

7b. Soil fine in texture; gradient generally less than 5%..Tree willow, cottonwood, alder aspen (above 1500 m), dogwood, mock orange and other shrubs, dense stands of grasses, sedges and forbes.

KEY FOR ASSESSING RIPARIAN VEGETATION POTENTIAL OF RESERVOIRS

1a. Water level of reservoir unstable

- 2a. Water level fluctuates more than one meter vertically and six meters horizionally so that majority of basin is dry by mid summer.
  - 3a. Shoreline soil extremely rocky...no vegetation.
  - 3b. Shoreline soil fine in texture; bottom gradient less than 5%...Sparse sedges and watergrasses.
- 2b. Water level fluctuates less than one meter vertically and six meters horizonally so that majority of basin is moist all year.
  - 4a. Shoreline gradient exceeds 20%.
    - 5a. Shoreline extremely rocky...No vegetation.
    - 5b. Shoreline soil fine in texture ...Narrow band of shrub willow, cattail, bullrush, grasses and forbs.
  - 4b. Shoreline gradient less than 20%
    - 6a. Shoreline extremely rocky...Narrow bank of cattails, bullrushes, grasses, sedges and forbs; a few shrub species possible.
    - 6b. Shoreline soil fine in texture...Tree and shrub willow, cottonwood, alder, rose, and other shrubs, diverse and densely rooted grasses, sedges and forbs. Suitable for planting exotic species such as Chinese elm and Russian olive.

1b. Water level of reservoir constant (springfed)

- 7a. Soil highly alkaline...Alkali bullrush, salt grasses and other salt tolerant species.
- 7b. Soil not high alkaline ...Densely rooted sedges, forbs and grasses, few or no shrubs or trees.

WARNING

Always check the Data Element Dictionary for the latest codes to use before filling out the forms. The input will be edited against the codes shown in the Data Element Dictionary, NOT by this handout which may not be completely up-to-date! This handout is provided as a help for the biologist who may desire to complete forms in a field situation where a complete Dictionary is not available. Some data elements have not been reproduced because of volume, but space has been left for you to look up and list the most commonly used codes in your location. For instance, If the 30,000 plants codes were reproduced, you might as well carry and use the entire dictionary rather than a possibly out-of-date reproduction. Copies of the complete Data Element Dictionary can be obtained upon request from the Wildlife User Representative in the Service Center (D-472) Phone FTS-776-0142 or Commercial (303)236-0142, or you can use the program KBT/KEYINQ to get up-to-date information on specific data elements.

GENERAL INSTRUCTIONS: Complete the forms in pencil and forward to Division of Resource Systems (D-470), Denver Service Center for editing and preparation of data base for field office use.

Prepared by:
Division of Resource Systems
Denver Service Center
June 5, 1985

* *
* IMPORTANT NOTICE: All entries must be clear and legible. *
* The codes shown in this list are from the Data Element *
* Dictionary and are the only authorized codes which may be *
* used on this form. Any other codes, not in the dictionary *
* will be treated as errors by the computer. After the *
* Fisheries Biologist completes the form, the data can be *
* key-entered into the computer system. The numbers in ( ) *
* on the form refer to the instructions below. *
* All location information is related to the downstream *
* beginning of the stream segment. Input on this form can be *
* for lakes or stream segments; specify which in (19). *
* *

Item

1 **RECORD NUMBER** = Entered automatically by edit program.

2 **RECORD TYPE** = Will be W9 for these forms.

3 **ACTION CODE** = Enter A=ADD

4 **PAGE NUMBER** = Number each page submitted consecutively.

5,6,7,8 **STATE, DISTRICT, RESOURCE AREA. PLANNING UNIT** = Enter proper code from Data Element (D.E.) 0003. Planning Unit is optional. For those states no longer using planning unit, enter 00.

Look Up The Codes For The Areas You will be working in and write them here.

	STATE	DISTRICT	RESOURCE AREA	PLANNING OR SUB-UNIT
Example:	UT(Utah)	06(Moab)	68(Grand)	03(Dolores)

9,10 **COUNTY(s)** = Enter proper code from D.E. 0002 that indicates the County involved (or Counties where the County line is the stream).

Look up the County Codes for the Counties in your area

039 SAN JUAN

11 **SPECIAL MANAGEMENT UNIT** = Use of this space is OPTIONAL locally. For instance, you may wish to enter allotment/ pasture, timber sale unit, or habitat management area (15 letters or numbers). D.E. 5370.

Look up and enter the numbers of any special management units you wish to identify
Use extra space on page 26 if necessary.

____________ ____________ ____________ ____________

____________ ____________ ____________ ____________

____________ ____________ ____________ ____________

12 **UTM COORDINATES** = Use of this space is OPTIONAL, however, its use will permit this data to be coordinated with Geographic Information Systems without the necessity of digitizing each stream segment. Universal Transverse Mercator Codes are made up of 2 numbers for the zone, 6 numbers for easting and, 7 characters for northing. If not used, leave blank; do not insert any other numbers or letters. D.E. 7515

UTM Coordinates are coded off of the maps, so no expansion for this codes are provided.

13 **MERIDAN** = Enter appropriate code from D.E. 1703.

01	1ST PM
02	2ND PM
03	3RD PM
04	4TH PM
05	5TH PM
06	6TH PM
07	BLACK HILLS MER
08	BOISE MER
09	CHICKASAW MER
10	CHOCTAW MER
11	CIMARRON MER
12	COPPER RIVER MER
13	FAIRBANKS MER
14	GILA-SALT R. MER
15	HUMBOLDT MER
16	HUNTSVILLE MER
17	INDIAN MER
18	LOUISIANA MER
19	MICHIGAN MER
20	PRIN MER, MT
21	MOUNT DIABLO MER
22	NAVAJO MER
23	NEW MEX PM
24	ST. HELENA MER
25	ST. STEPHENS MER

26	SALT LAKE MER
27	SAN BERNARD. MER
28	SEWARD MER
29	TALLAHASEE MER
30	UINTAH SPEC MER
31	UTE MER
32	WASHINGTON MER
33	WILLAMETTE MER
34	WIND RIVER MER
35	OHIO RIV SUR
36	BTWN MIAMIS
38	OH RIV BASE
39	1ST SCIOTO R
40	2ND SCIOTO R
41	3RD SCIOTO R
42	ELLICOTTS L.
43	TWELVE-MI-SQ
44	KATEEL RIVER MER
45	UMIAT MER
46	4TH PM MN-WI
47	W.OF G.MIAMI
48	US MIL SUR
91	CT WEST RES-OHIO
92	OHIO CO PUR-OHIO
93	VA MIL SUR-OHIO
99	NOT PLS SUR

14 **TOWNSHIP** = Enter 3 character whole township number followed by one character code indicating a partial or whole township, followed by either an N or S, indicating direction from baseline. See D.E. 1695 for additional information and partial township codes. Example: T43N =0430N

15 **RANGE** = Same as for township. See D.E. 1699 for additional information. Example: R33E = 0330E

16 **SECTION** = Enter section number (usually 1-36) as 001 or 036. See D.E. 2506.

17,18 **QUARTER, QUARTER/QUARTER** = Enter either NE, SE, SW, or NW. See D.E. 6565.

19 **WATER TYPE** = Enter a code from D.E. 5368

E	EPHEMERAL STREAM
I	INTERMITTENT STREAM
L	LAKE OR POND
P	PERENNIAL STREAM
R	RESERVOIR

20 **NAME OF WATER BODY/RIPARIAN AREA** = Enter up to 15 characters for name of lake, stream, or riparian area. D.E. 4601.

21 **SEGMENT CODE NUMBER** = Local entry OPTIONAL to use local segment identification systems (16 char) D.E. 5369.

22 **BASIN** = Enter 1st 8 characters of major river basin. D.E.6931.

23 **ADAJACENT SWA NUMBER** = Enter the number for the mapping unit if ESI or IHICS inventories have been conducted on the same area. The same SWA Number must be used to represent the same map area. See D.E. 3507.

24,25 **BEGINNING AND ENDING RIVER MILES** = beginning river mile, D.E. 3484, & ending river mile, D.E. 3483, from the mouth of stream segment (outlet for lakes).

26 **SEGMENT LENGTH** = Subtract (24) from (25).

27-30 **NUMBER OF STREAM MILES BY OWNERSHIP** = Enter number of stream miles by ownership type. Enter Zero if none for any ownership. (27-30) should total (24).

31 **STREAM ORDER** = Enter stream order from codes in D.E. 5335 (omit for lakes).

01	FIRST ORDER	STREAMS WITH NO BRANCHES
02	SECOND ORDER	STREAMS WHICH RECEIVE 1ST ORDER STREAMS
03	THIRD ORDER	STREAMS WHICH RECEIVE 2ND ORDER STREAMS
04	FOURTH ORDER	STREAMS WHICH RECEIVE 3RD ORDER STREAMS
05	FIFTH ORDER	STREAMS WHICH RECEIVE 4TH ORDER STREAMS
06	SIXTH ORDER	STREAMS WHICH RECEIVE 5TH ORDER STREAMS
07	SEVENTH ORDER	STREAMS WHICH RECEIVE 6TH ORDER STREAMS
08	EIGHTH ORDER	STREAMS WHICH RECEIVE 7TH ORDER STREAMS
09	NINTH ORDER	STREAMS WHICH RECEIVE 8TH ORDER STREAMS
10	TENTH ORDER	STREAMS WHICH RECEIVE 9TH ORDER STREAMS

32. **ANADROMOUS FISH STREAM** = Enter Y(Yes) or N(No) if the stream or lake now has or potentially will support anadromous fish species. D.E. 5367.

33,34 **DATE OF SUMMARIZED INFORMATION** = Enter year, month, and day that the sumarized data represents. Data may have come from a number of sources over a period of time. Enter Nov. 25, 1983 as 831125. D.E. 0213.

35 **ADAJACENT LANDFORM** = Enter 3 character code for landform from D.E. 5132.

AFL	ALLUVIAL FLAT
ALF	ALLUVIAL FAN
ALP	ALLUVIAL PLAIN
ARY	ARROYO
ASE	AXIAL STREAM
ASF	AXIAL-STREAM FLOODPLAIN
BAA	BAJADA
BAI	BARRIER ISLAND

BAL	BADLANDS
BAR	BARRANCA
BDF	BOLSON FLOOR
BEG	GRAVEL BEACH
BEP	BEACH PLAIN
BES	SAND BEACH
BET	BEACH TERRACE
BFE	BASIN FLOOR-EXTERNAL DRAINAGE
BFI	BASIN FLOOR-INTERNAL DRAINAGE
BFR	BASIN FLOOR REMNANT
BKS	BACKSLOPE
BMR	BOG MARSH RIPARIAN
BNC	BENCH
BOL	BOLSON
BPR	BEAVER POND RIPARIAN
BRR	BAR (OFFSHORE & BARRIER)
BSF	BASIN FLOOR
BTT	BUTTE
BYN	BALLENA
CAL	CALDERA
CAN	CANYON
CES	CUESTA
CHL	CHANNEL
CIN	CINDER CONE
CRT	CREST
DMR	DRY MEADOW RIPARIAN
DOM	DOME
EFR	EROSIONAL FAN REMNANT
ENR	ENDOGENIC ROCK
EXR	EXOGENIC ROCK
FAC	FAN COLLAR
FAN	FAN PIEDMONT
FAP	FAN APRON
FAS	FAN SKIRT
FHT	FAN-HEAD TRENCH
FLV	FLUVE
FPL	FLOOD PLAIN
FPP	FLOODPLAIN PLAYA
FRD	FIORD
FTS	FOOTSLOPE
GCR	GLACIAL CIRQUE
GLA	GLACIER
GMR	GLACIAL MORAINE
GOW	GLACIAL OUTWASH
GTO	GLACIAL TROUGH
GUL	GULLY
HBK	HOGBACK
HIL	HILL
IDF	INTERDUNE FLAT
INB	INTERMONTANE BASIN
INF	INSET FAN
IPR	INTERMITTENT PLAYA RIPARIAN
ISL	ISLAND
ISR	INTERMITTENT STREAM RIPARIAN
ITB	INTRAMONTANE BASIN

ITF	INTERFLUVE
IVD	INTERFAN-VALLEY DRAINAGE
KRS	KARST
LAG	LAGOON
LAP	LAKE PLAIN
LCP	LACUSTRINE PLAIN
LPT	LAKE-PLAIN TERRACE
MAN	LAVA FLOW-NONVEGETATED
MAV	LAVA FLOW-VEGETATED
MFH	MOUNTAIN FOOTHILLS
MSA	MESA
MTN	MOUNTAIN
MVF	MOUNTAIN-VALLEY FAN
NBR	NONBURIED REMNANT
OLR	LAKE RIPARIAN
ORR	RESERVOIR RIPARIAN
OSR	STREAM RIPARIAN
PAB	PARTIAL BALLENA
PAD	PARNA DUNE
PED	PEDIMENT
PEP	PENEPLAIN OR PLA
PER	PEDIMONT REMNANT
PIN	PINGO
PMS	PEDIMONT
PMT	PIEDMONT
PYA	PLAYA
RAF	RECENT ALLUVIAL FLAT
RAV	RAVINE
RDG	RIDGE
REF	RELICT ALLUVIAL FLAT
ROP	ROCK PEDIMENT
RPR	ROCK-PEDIMENT REMNANT
RUP	ROLLING UPLANDS
SBF	SEMI-BOLSON FLOOR
SBS	SUBSIDENCE
SCL	SEA CLIFF
SDL	SADDLE
SDN	SAND DUNE
SDS	SAND SHEET
SEB	SEMI-BOLSON
SHD	SHOULDER
SIS	SIDESLOPE
SNK	SINKHOLE
SPT	SPIT
SRP	SCARP
SRT	STREAM TERRACE
SUL	SEDIMENTARY UPLANDS
SUM	SUMMIT
SUR	SUB RIPARIAN
SWL	SWALE
SWR	SALT WATER RIPARIAN
TRC	TERRACE
UPL	UPLANDS
VAL	VALLEY
WMR	WET MEADOW RIPARIAN

36 ASSOCIATION = Enter 3 digit code for Kuchler's Association from D.E. 6536 and map.

000	NONE
001	SPRUCE-CEDAR-HEMLOCK FOR
002	CEDAR-HEMLOCK-DOUGLASFIR
003	SILVER-DOUGLAS FIR FOR.
004	FIR-HEMLOCK FOREST
005	MIXED CONIFER FOREST
006	REDWOOD FOREST
007	RED FIR FOREST
008	LODGEPOLE PINE-SUBALPINE
009	PINE-CYPRESS FOREST
010	PONDEROSA SHRUB FOREST
011	WESTERN PONDEROSA FOREST
012	DOUGLAS FIR FOREST
013	CEDAR-HEMLOCK-PINE FOR.
014	GRAND FIR-DOUGLAS FIR
015	WESTERN SPRUCE-FIR FOR.
016	EASTERN PONDEROSA FOREST
017	BLACK HILLS PINE FOREST
018	PINE-DOUGLAS FIR FOREST
019	ARIZONA PINE FOREST
020	SPRUCE-FIR-DOUGLAS FIR
021	SOUTHWESTERN SPRUCE FIR
022	GREAT BASIN PINE FOREST
023	JUNIPER-PINYON WOODLAND
024	JUNIPER STEPPE WOODLAND
025	ALDER ASH FOREST
026	OREGON OAKWOODS
027	MESQUITE BOSQUES
028	MOSAIC OREGON OAKWOODS
029	CA.MIXED EVERGREEN FOR.
030	CALIFORNIA OAKWOODS
031	OAK-JUNIPER WOODLAND
032	TR.OAK-JUNIPER-MTMANGOAK
033	CHAPARRAL
034	MONTANE CHAPARRAL
035	COASTAL SAGEBRUSH
036	MOSAIC CA. OAKWOOD-SAGE
037	MT.MAHOGANY-OAK SCRUB
038	GREAT BASIN SAGEBRUSH
039	BLACKBRUSH
040	SALTBUSH-GREASEWOOD
041	CREOSOTE BUSH
042	CREOSOTE-BUR SAGE
043	PALO VERDE-CACTUS SHRUB
044	CREOSOTE BUSH-TARBUSH
045	CENIZA SHRUB
046	DESERT
047	FESCUE-OATGRASS
048	CA.STEPPE
049	TULE MARSHES
050	FESCUE-WHEATGRASS

051	WHEATGRASS-BLUEGRASS
052	ALPINE MEADOWS AN BARREN
053	GRAMA-GALLETA STEPPE
054	GRAMA-TOBOSA PRAIRIE
055	SAGEBRUSH STEPPE
056	WHEAT-NEEDLEGRASS SHRUB
057	GALLETA-3AWN SHRUBSTEPPE
058	GRAMA-TOBOSA SHRUBSTEPPE
059	TRANS PECOS SHRUB SAVANA
060	MESQUITE SAVANNA
061	MESQUITE-ACACIA SAVANNA
062	MESQUITE-LIVE OAK SAVANA
063	FOOTHILLS PRAIRIE
064	GRAMA-NEEDLE-WHEATGRASS
065	GRAMA-BUFFALO GRASS
066	WHEATGRASS-NEEDLEGRASS
067	WHEAT-BLUESTEM-NEEDLEGRS
068	WHEAT-GRAMA-BUFFALO GRAS
069	BLUESTEM-GRAMA PRAIRIE
070	SANDSAGE-BLUESTEM PRAIRE
071	SHINNERY
072	SEA OATS PRAIRIE
073	NO.CORDGRASS PRAIRIE
074	BLUESTEM PRAIRIE
075	NE SANDHILLS PRAIRIE
076	BLACKLAND PRAIRIE
077	BLUESTEM-SACAHUISTA PRAI
078	SO.CORDGRASS PRAIRIE
079	PALMETTO PRAIRIE
080	MARL-EVERGLADES
081	OAK SAVANNA
082	MOSAIC-BLUESTEN-OAK-HICK
083	CEDAR GLADES
084	CROSS TIMBERS
085	MESQUITE-BUFFALO GRASS
086	JUNIPER-OAK SAVANNA
087	MESQUITE-OAK SAVANNA
088	FAYETTE PRAIRIE
089	BLACKBELT
090	LIVE OAK-SEA OATS
091	CYPRESS SAVANNA
092	EVERGLADES
093	GL SPRUCE-FIR FOREST
094	CONIFER BOG
095	GREAT LAKES PINE FOREST
096	NE SPRUCE-FIR FOREST
097	SE SPRUCE-FIR FOREST
098	N.FLOODPLAIN FOREST
099	MAPLE-BASSWOOD FOREST
100	OAK-HICKORY FOREST
101	ELM-ASH FOREST
102	BEECH-MAPLE FOREST
103	MIXED MESOPHYTIC FOREST
104	APPALACHIAN OAK
105	MANGROVE

106	NORTHERN HARDWOODS
107	NO HARDWOOD-FIR FOREST
108	NO HARDWOOD-SPRUCE FOR
109	TRANS-APP-OAK-NO-HARDWDS
110	NE OAK-PINE FOREST
111	OAK-HICKORY-PINE FOREST
112	SO MIXED FOREST
113	SO FLOODPLAIN FOREST
114	POCOSIN
115	SAND PINE SCRUB
116	SUBTROPICAL PINE FOREST
131	HEMLOCK-SPRUCE FOREST
132	SPRUCE-BIRCH FOREST
133	BLK SPRUCE FOREST
134	MUSKEG
135	ALDER THICKETS
136	COTTONSEDGE TUNDRA
137	WATERSEDGE TUNDRA
138	DRYAS MEADOWS AN BARRENS
139	ALEUTIAN MEADOWS
140	ALEUTIAN HEATH BARRENS

------ Association Codes below for use in Alaska Only ----------

511	CLOSED NEEDLELEAF FOREST
512	OPEN NEEDLELEAF FOREST
513	NEEDLEAF WOODLAND
521	CLOSED BROADLEAF FOREST
522	OPEN BROADLEAF FOREST
523	BROADLEAF WOODLAND
531	CLOSED MIXED FOREST
532	OPEN MIXED FOREST
533	MIXED WOODLAND
611	CLOSED DWARF TREE SCRUB
612	OPEN DWARF TREE SCRUB
613	DWARF TREE SCRUB WOODLAN
621	CLOSED TALL SHRUB SCRUB
622	OPEN TALL SHRUB SCRUB
631	CLOSED LOW SHRUB SCRUB
632	OPEN LOW SHRUB SCRUB
641	CLOSED DWARF SHRUB SCRUB
642	OPEN DWARF SHRUB SCRUB
711	DRY GRAMINOID HERBACEOUS
712	MESIC GRAMINOID HERBACEO
713	WET GRAMINOID HERBACEOUS
721	DRY FORBS HERBACEOUS
722	MESIC FORBS HERBACEOUS
723	WET FORB HERBACEOUS
731	MOSSES
732	LICHENS
741	FRESHWATER AQUATIC HERB
742	BRACKISHWATER AQUATIC HE
743	MARINE AQUATIC HERBACEOU

37 **PHYSIOGRAPHIC REGION** = Enter 2 digit code from D.E. 6538 and map.

01 NORTHERN PACIFIC BORDER REGION
02 CASCADE MOUNTAIN REGION
03 SOUTHERN PACIFIC BORDER REGION
04 SIERRA MOUNTAIN REGION
05 COLUMBIA PLATEAU REGION
06 UPPER BASIN AND RANGE REGION
07 LOWER BASIN AND RANGE REGION
08 NORTHERN ROCKY MOUNTAIN REGION
09 MIDDLE ROCKY MOUNTAIN REGION
10 WYOMING BASIN REGION
11 SOUTHERN ROCKY MOUNTAIN REGION
12 COLORADO PLATEAU REGION
13 ROCKY MOUNTAIN PIEDMONT REGION
14 GREAT PLAINS REGION
15 BLACK HILL UPLIFT REGION
16 UPPER MISSOURI AND BROKENLANDS REGION
17 CENTRAL LOWLAND
18 LAKE PLAINS
19 OZARK PLATEAU
20 MISSISSIPPI DELTA AND PLAIN
21 COASTAL PLAINS
22 APPALACHIAN PLATEAUS
23 NEW ENGLAND PLATEAUS
36 ALASKAN ARTIC COASTAL PLAINS REGION
37 ALASKAN ROCKY MOUNTAIN REGION
38 ALASKAN INTERMOUNTAIN REGION
39 ALASKAN PACIFIC MOUNTAIN REGION

38 **ELEVATION** = Enter Elevation above Sea Level for the lake or the beginning of the stream segment. D.E. 0431.

39 **DATA COMPILED BY** = Enter name of person compiling form. D.E. 2464.

40 **AGENCY OF COMPILER** = Enter from the following codes in D.E. 5365.

B	BLM
C	CONTRACTOR
F	USFS
O	OTHER
R	RESEARCHER
S	STATE
U	UNIVERSITY
W	USF&W

============= RIPARIAN VEGETATION INFORMATION =============

41 **ACREAGE** = Enter the acreage of the associated riparian vegetation. This will usually be the acreage of your SWA (23) or your mapping unit. D.E. 3138.

42 **LIMITING FACTORS** = Choose code from D.E. 5364 which best describes the limiting factor for the riparian vegetation.

DI	DISTURBANCE
GR	GRAZING
NO	NONE
SC	SCOUR
ST	SOIL TYPE
WI	WILDLIFE

43 **IMPROVEMENT POTENTIAL** = Choose a code from D.E. 5363 which best describes the potential for improvement of the riparian vegetation.

L	LOW
M	MEDIUM
H	HIGH
N	NONE

44 **EXISTING TREND** = Estimated existing trend of riparian vegetation. D.E. 2626.

U	UPWARD
D	DOWNWARD
S	STABLE

45 **PERCENT STREAM SHADING** = Enter estimated percent the stream is shaded at noon each day. D.E. 7096.

46 **LIVESTOCK UTILIZATION** = Enter code for estimated livestock utilization of the riparian vegetation from the viewpoint of the biologist and species using the area. Use D.E. 3832.

0	NONE	0%	UTIL-CURRENT YEARS GROWTH
1	SLIGHT	1-20%	UTIL-CURRENT YEARS GROWTH
2	LIGHT	21-40%	UTIL-CURRENT YEARS GROWTH
3	MODERATE	41-60%	UTIL-CURRENT YEARS GROWTH
4	HEAVY	61-80%	UTIL-CURRENT YEARS GROWTH
5	SEVERE	81-100%	UTIL-CURRENT YEARS GROWTH

```
************************************************************************
***  The following fields (47) - (56) refer to the existing          ***
***  vegetation structure, while (57) - (60) refer to the            ***
***  potential vegetation sturcture as estimated by the biologist ***
************************************************************************
```

47 **EXISTING PERCENT HERBACEOUS** = Enter estimated percent ground cover by herbaceous plants. D.E. 2628.

48,49 **DOMINANT AND SUB-DOMINANT HERB SPECIES** = Enter the proper plant codes from D.E. 2646 for the dominant and subdominant herbaceous species

Look up and list the most common herbaceous plants expected to be found in your area

50 **EXISTING PERCENT SHRUB** = Enter estimated percent ground cover by shrubs. D.E. 2628.

51,52 **DOMINANT AND SUB-DOMINANT SHRUB SPECIES** = Enter the proper plant codes from D.E. 2646 for the dominant and subdominant shrub species.

Look up and list the most common shrubs expected to be found in your area

53 **EXISTING PERCENT TREES** = Enter the estimated percent ground cover by trees. D.E. 2628.

54,55 **DOMINANT AND SUB-DOMINANT TREE SPECIES** = Enter the proper plant codes from D.E. 2646 for the dominant and subdominant tree species.

Look up and list the most common trees expected to be found in your area

____________ ____________ ____________

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56 **EXISTING PERCENT ROCK AND BARE GROUND** = Enter estimated % of mapping unit covered by rock and bare ground. D.E. 0754.

****
*** Note: (47) + (50) + (53) + (55) should equal 100 % ***
*** also (57) + (58) + (59) + (60) should equal 100 % ***
****

57 **POTENTIAL PERCENT HERBACEOUS** = D.E. 2628
58 **POTENTIAL PERCENT SHRUB** = D.E. 2628
59 **POTENTIAL PERCENT TREES** = D.E. 2628
60 **POTENTIAL PERCENT ROCK AND BARE GROUND** = D.E. 0754

61-72 **SUMMARY RATINGS** from rating sheet (SEE PAGE 27) are all coded (E)=EXCELLENT (G)=GOOD (F)=FAIR (P)=POOR D.E.5372,5373,5390,5374,5389,5375,5391,5392,5393,5511,5509,5510.

73 **AVERAGE WATER DEPTH** = Enter average depth of lake or stream in feet and tenths of feet. D.E. 7074.

74 **AVERAGE STREAM WIDTH** = Enter the average width of the stream in feet and tenths of feet (omit for lakes). D.E.7043.

75 **SURFACE ACRES** = Calculate the surface acres of water (may be omitted for streams). D.E. 5404.

76 **SOIL ERODABILITY** = Enter estimated rating based on visual observation by biologist or on other information if available. D.E. 4515.

1	SLIGHT
2	MODERATE
3	SEVERE

77 **BANK EROSION CAUSE** = Select the major cause of bank erosion from D.E. 5362.

F	FIRE
L	LIVESTOCK
M	MAN-CAUSED
N	NATURAL
O	OTHER
P	RECREATIONAL
R	ROAD
T	TIMBER HARVEST
X	NONE

78 **OVERALL FISH HABITAT CONDITION** = Select proper code from D.E. 2654.

E	EXCELLENT
F	FAIR
G	GOOD
P	POOR

79 **FISH HABITAT CONDITION TREND** = Enter estimated trend from D.E.5361.

U	UP
D	DOWN
S	STABLE
X	NOT KNOWN

80-82 **FISH LIMITING FACTORS** = Select the 3 most important limiting factors from the list in D.E. 5360. Place the most important factor (if it can be ranked) in the left box and the next (if any) in the middle box etc.

A	WATER QUALITY
B	SEDIMENTATION
C	POOLS FEW IN NO & SMALL SIZE
D	BARRIERS TO MIGRATION
E	LACK OF SPAWNING GRAVEL
F	LACK OF INSTREAM COVER
H	STEEP GRADIENT
I	LACK OF RIPARIAN VEGETATION COVER
J	LW SUMMER FLOWS
K	LACK OF FOOD SUPPLY
N	NONE

83 WATER QUALITY PROBLEMS = Enter the most limiting water quality problem from codes in D.E. 5359.

A	ACIDITY
B	ALKALINITY
D	LOW DISOLVED OXYGEN
M	DISOLVED METALS
N	NONE
P	ORGANIC POLLUTANTS
S	SEDIMENTATION
T	WATER TEMPERATURE
X	NOT-KNOWN

84 FISH HABITAT POTENTIAL = List your estimate of the potential of the lake or stream segment for the production of fish. Select the proper code from D.E. 5358.

H	HIGH
L	LOW
M	MEDIUM
N	NONE

85 FISH HABITAT IMPROVEMENT POTENTIAL = From the codes in D.E. 5309, evaluate the improvement potential for the segment.

H	HIGH
L	LOW
M	MEDIUM
N	NONE

86 AVERAGE POOL VOLUME = Enter average pool volume in cubic meters for the pools in the stream segment (omit for lakes). D.E. 5308.

87 TYPE IMPACT/DISTURBANCE IN RIPARIAN ZONE = From the codes in D.E. 6671, select the most prevalant impact/disturbance.

CO	CONSTRUCTION
FO	FACILITIES OPERATIONS
NO	NONE
OA	OTHER ANIMALS
OT	OTHER
PE	PEOPLE
VE	VEHICLES

88 YEAR LAST DISTURBED = If (87) shows that the riparian area has been logged, mined, or otherwise disturbed, enter the last two digits of the year when it was last disturbed. D.E. 0204.

89 MILES OF ROAD IN RIPARIAN ZONE = Enter the number of miles (to nearest 1/10) of road that are within the SWA (#23). This would include the length of road that crosses the stream as well as that which might run parallel to the lake or stream in the riparian zone. D.E. 3668.

90 **MILES OF STREAM DISTURBED** = Enter the length (to the nearest 1/10 mile) of the stream segment along which the riparian area has been disturbed (87 or 88). Enter shoreline miles for lakes. D.E. 3668.

91 **MILES OF BUFFER STRIP ADAJACENT TO ROAD** = Enter the number of miles (to nearest 1/10) of the buffer strip within the SWA (#23). D.E. 5306.

92 **MILES OF BUFFER STRIP ADAJACENT TO THE RIPARIAN ZONE** = Enter the number of miles (to nearest 1/10) of buffer strip in the SWA (#23). D.E. 5305.

93-95 **FISHERIES MANAGEMENT RECOMMENDATIONS** = Select from codes in D.E. 5371 the 3 most important recommendations for fisheries management in this segment. If all 3 are not used, enter X in unused recommendations.

A	DEVELOP POOLS
B	CONTROL GRAZING
C	CHANGE FLOW
D	REMOVE STREAM OBSTRUCTIONS
F	MODIFY CULVERTS
G	PLANT RIPARIAN VEGETATION
H	MODIFY CANOPY
N	NONE
X	NO OTHER RECOMMENDATIONS

96-98 **REMARKS** = Do not exceed the 40 characters provided on each line. These are remarks about the water body/riparian zone or SWA (#23) that is being inventoried. D.E. 2663.

99-100 **LOCATION OF SPECIFIC INFORMATION** = This form only provides summary information for entry into the computer. List here the name and address where the field data, samples, rating sheets, maps etc. are kept that provided data for this summary report. Be specific; state file if possible. D.E. 2663.

================== FISH INFORMATION ======================

101 **FISH SPECIES CODE** = Enter code from D.E. 6803 for fish species. List up to 10 most important fish.

Look up and list the most common fish expected to be found in your area

102 **SAMPLING METHOD** = Select code from D.E. 6804 which reflects the most prevalent method(s) for gathering the fisheries occurrence data.

E	ELECTRO FISHING
N	NET
O	OTHER
S	SEINE

103 **SIZE RANGE** = Enter the 1 digit code from D.E. 5301 that represents the average size of the fish species. More than one entry can be made if significant differences exist.

1	1-3 IN
2	4-6 IN
3	7-10 IN
4	11-15 IN
5	16 IN+

104 **NUMBER/100 FT** = List the average number of fish of the species per 100 foot in this stream segment. D.E. 5300

105 **RELATIVE ABUNDANCE** = Estimate the relative abundance of this species in this lake or stream segment; use the codes found in D.E. 6528.

A	ABUNDANT	ABUNDANT/OR BEST PRIMARY HABITAT
C	COMMON	COMMON /OR AVERAGE HABITAT
H	HYPOTHETICAL	
O	OCCASIONAL	
R	RARE	
U	UNCOMMON	UNCOMMON MARGINAL HABITAT

106 **STATUS** = Enter codes from D.E. 6530 to indicate the offical designated status of the species. Species which are not designated in a special manner are coded OT=Other.

EX	EXPERIMENTAL POPULATION	DESIGNATED BY FWS
FE	FEDERAL ENDANGERED	UNDER ACT OF 1973
FP	FEDERALLY PROPOSED	PROPOSED AS AN ADDITION TO THE FEDERALLY THREATENED LIST OR THE FEDERALLY ENDANGERED LIST.
FT	FEDERAL THREATENED	UNDER ACT OF 1973
MM	MARINE MAMMAL	MARINE MAMMAL PROT. ACT OF 1972
OT	OTHER	ALL SPECIES NOT INCLUDED IN OTHER CATEGORIES OR UNDESIGNATED SPECIES.
PR	PRIORITY	
SE	SENSITIVE	SPECIES OFFICALLY DESIGNATED BY THE BLM STATE DIRECTOR
SL	STATE LISTED	UNDER STATE LAW OR DESIGNATION

Use these blanks if extra space is needed to look up frequently used codes, where insufficent room was provided with the definitions.

D.E. #

STREAM HABITAT FEATURES RATING

Feature	Excellent	Good	Fair	Poor
Riparian Vegetation E61	Little or no disturbance of plant community. Succession progressing or stable. Abundance of both new and old plant or stable.	Succession progressing or stable. New and old growth common Potential for increased plant density. Some patches of clipped vegetation. Seedstalks readily observable. Some woody plants hedged.	Noticeable disturbance. Medium to high successional availability. Most woody plants hedged. Grass clipped to ground in places. Fair possibility of riparian habitat regression.	Extreme disturbance. Large patches of bare soil. Grass with mown appearance. Little or no production of key plant species. Woody species hedged or broken. Riparian vegetation regressing or nearly so.
Flow Pattern E62	Perennial stream, flooding rare, stable flow pattern.	Perennial stream moderate seasonal flow.	Intermittant Stream, streambed dry during part of the year.	Ephemeral stream, flows only after heavy rain.
Gradient E63	0 to 1%, Flat	1.0 to 2.5%, Moderate	2.5 to 5%, Steep	5% + very steep
Temperature E64	Max. Summer Temp 18 deg C (H) or 27 deg C (WW). Min Winter Temp 7 deg C (CW) or 16 deg C (WW). No surface freezing.	Max Summer Temp 22 deg C (CW) or 30 deg C (WW). Min Winter Temp 5 deg C (CW) or 13 deg C (WW). Surface freezing rare.	Max Summer Temp 26 deg C (CW) or 33 deg C (WW). Min Winter Temp 1 deg C (CW) or 10 deg C (WW). Surface freezing common. Some anchor ice.	Max Summer Temp 30 deg C (CW) or 36 deg C (WW) Min Winter Temp 0 deg C (CW) or 7 deg C (WW). Extensive surface or anchor ice.
Bank Stability E65	Bank undisturbed, firm, stabilized by roots, logs or rocks over 12".	Some bank erosion, roots, logs, rocks over 12" common.	Bank erosion common even at low flow, severe at high flow. Some logs, roots, rocks 6" + present.	Extensive erosion, common at low flow, severe at high flow. Little or no rock, log, or vegetation protection.
Channel Stability E66	Channel well defined, less than 5% of channel affected by scouring or deposition.	Most of channel well defined Some flooding 5 to 30% affected by scouring or deposition. Some bar formation.	Main channel defined; some channel spreading 30 to 70% affected by scouring or deposition. Pools silted.	Channel poorly defined, unstable. Over 70% bed actively scouring or depositing. Channel, pools shallow. Extensive flats.
Pool Quanity and Quality E67	Over 25% of channel is pool; length or width 2X average stream width; depth over 20% average stream width; cover abundant.	13 to 25% of channel is pool; length or with less than 2X average stream width; depth 10 to 20% of avg stream width; cover ample.	5 to 12% of channel is pool; length or width equal to avg stream width; depth 5 to 10% of avg stream width; some cover.	Less than 5% of channel is pool. pool. Greatest length or width, depth less than 5% of avg stream width. Little or no cover.
Riffle/Rapids E68	Stream 45 to 55% riffle or rapids.	Stream 25 to 45% or 55 to 75% riffle or rapids.	Stream less than 25% riffle or rapid.	Stream greater than 75% riffle or rapid
Bottom Material E69	Bed over 80% rocky material 2" or more. Sediments only in back areas, deep pools.	Bed material 40 to 75% rocky material over 2". Sediments in quiet areas, abundant in pools.	Bed material 15 to 40% rocky material over 2". Sediments cover bed in most quiet areas.	Bed material over 2" less than 15%. Bottom covered with sediments in all but fast water.
Embeddedness E70	Not embedded	0 to 25% lightly embedded	25 to 75% Moderately embedded	75 to 100% Highly embedded
Spawning Area E71	Over 25% of channel usable for spawning. No migration blocks	13 to 25% of chanel usable for spawning. No migration blocks, or only at extreme flows.	5 to 12% of chanel usable for spawning. Migration open at least part of time	Under 5% of chanel usable for spawning. Migration routes often obstructed.
In Stream Structure Diversity E72	Tree limbs and boles, large boulders common, evenly distributed. Diversity of habitats, cover abundant, stable.	Tree limbs, boles, boulders and large rocks fairly common, usually evenly distributed, stable. Cover adequate; several habitat types.	Some limbs, boles, boulders, large rock; uneven distribution. Few different habitats; limited cover. Structure often shifts.	Woody or rock structure limited or absent, distribution random. Unstable. Little or no cover. Little or no habitat diversity.

```
FORM 6602-9 DRAFT 6/85 RIPARIAN/AQUATIC INFORMATION DATA SUMMARY-BUREAU OF LAND MANAGEMENT   (1) RECORD #  (2) RECORD TYPE :W:9: (3) ACTION      :_A:
  (5)      (6)      (7)RES (8)PLN    (9-10)               (11)                                                            (4) PAGE: :__:__:
STATE   DISTRICT   AREA    UNIT    COUNTY(S)            SPC MGT UNIT                             (12)UTM COORDINATES
:__:__: :__:__: :__:__: :__:__: :__:__:__::__:__:__: :__:__:__:__:__:__:__:__:__:__:__:__:__:   <ZONE> <----EASTING----> <-----NORTHING----->
                                                                                                  :__:__::__:__:__:__:__:__::__:__:__:__:__:__:__:
(13)MERIDIAN :__:__: (14)TOWNSHIP :__:__:__:__: (15)RANGE :__:__:__:__: (16) SECTION :__:__: (17)QUARTER :__: (18) QUARTER/QUARTER :__:__:

(19)WATER  :(20) NAME OF WATER BODY/RIPARIAN AREA      : :(21) SEGMENT CODE NUMBER                         : :(22) BASIN                ADJACENT
 TYPE :__: :__:__:__:__:__:__:__:__:__:__:__:__:__:__: :__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__: :__:__:__:__:__:    (23)SWA NUMBER
                                                                                                                               :__:__:__:
(24) BEGINNING RIVER  (25) ENDING RIVER     (26) SEGMENT     < - - - - - - - -  (27-30) NUMBER OF STREAM MILES BY OWNERSHIP - - - - - - - - - - >
MILE :__:__:__:.:__:  MILE :__:__:__:.:__:  LENGTH :__:__:.:__:  BLM :__:__:.:__:  OTHER FEDERAL :__:__:.:__:  STATE :__:__:.:__:  OTHER :__:__:.:__:

(31) STREAM  (32) ANADROMOUS FISH   DATE OF SUMMARIZED INFORMATION [YR/MO/DAY]                          (35) ADJACENT        (36) KUCHLER'S
ORDER :__:__:  STREAM :__:  (33) BEGINNING :__:__:/:__:__:/:__:__: (34) ENDING :__:__:/:__:__:/:__:__:  LANDFORM :__:__:__:  ASSOCIATION :__:__:__:

(37) PHYSIOGRAPHIC REGION :__:__:(38) ELEVATION :__:__:__:__:__:(39) COMPILED BY :__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__: (40) AGENCY :__:
============================================================ RIPARIAN VEGETATION INFORMATION ============================================================
                                         (41)ACREAGE
  Riparian Vegetation Structure Data    :__:__:__:__:.:__:   (42)LIMITING        (43)IMPROVEMENT   (44)EXISTING     (45)% SHADING  (46)LIVESTOCK
                                                             FACTORS :__:__:     POTENTIAL :__:    TREND :__:       :__:__:__:     UTILIZATION :__:
                        (48-49) DOMINANT AND
            % HERBACEOUS SUB-DOMINANT HERB SPECIES   % SHRUB    (51-52) DOMINANT AND                        (54-55) DOMINANT AND            % BARE
EXISTING> (47) :__:__:__: :__:__:__:__:__:__:   (50) :__:__:__: SUB-DOMINANT SHRUB SPECIES   % TREES   SUB-DOMINANT TREE SPECIES       GROUND
                          :__:__:__:__:__:__:                   :__:__:__:__:__:__:      (53) :__:__:__: :__:__:__:__:__:__:          (56):__:__:__:
                                                                :__:__:__:__:__:__:                      :__:__:__:__:__:__:
POTENTIAL>(57) :__:__:__:                       (58) :__:__:__:
                                                                                         (59) :__:__:__:                                (60):__:__:__:
=========================================================== SUMMARY INFORMATION ============================================================

(61) RIPARIAN VEGETATION RATING            :__:   (72) STREAM STRUCTURE DIVERSITY RATING     :__:   (85) FISH HABITAT IMPROVEMENT POTENTIAL     :__:
(62) FLOW PATTERNS RATING                  :__:   (73) AVERAGE WATER DEPTH FT.  __ __:__:__:.:__:
(63) GRADIENT RATING                       :__:   (74) AVERAGE WIDTH            :__:__:__:__:.:__:   (86) AVERAGE POOL VOLUME [CUBIC METERS]   :__:__:
(64) TEMPERATURE RATING                    :__:   (75) SURFACE ACRES          :__:__:__:__:.:__:     (87) TYPE IMPACT/DISTURBANCE RIPARIAN ZONE :__:__:
(65) BANK STABILITY RATING                 :__:   (76) SOIL ERODABILITY                      :__:   (88) YEAR LAST DISTURBED                  :__:__:
(66) CHANNEL STABILITY RATING              :__:   (77) BANK EROSION CAUSE                    :__:   (89) MILES ROAD IN RIPARIAN ZONE          :__:__:.:__:
(67) POOL QUALITY & QUANTITY RATING        :__:   (78) OVERALL FISH HABITAT CONDITION        :__:   (90) MILES STREAM DISTURBED               :__:__:.:__:
(68) RIFFLE  / RAPIDS RATING               :__:   (79) FISH HABITAT CONDITION TREND          :__:   (91) MILES BUFFER STRIP ADJ TO ROAD       :__:__:.:__:
(69) BOTTOM MATERIAL RATING                :__:   (80-82) FISH LIMITING FACTORS    :__::__::__:   (92) MILES BUFFER STRIP ADJ RIPARIAN ZONE :__:__:.:__:
(70) EMBEDDEDNESS                          :__:   (83) WATER QUALITY PROBLEMS                :__:
(71) SPAWNING AREA RATING                  :__:   (84) FISH HABITAT POTENTIAL                :__:  (93-95) FISHERIES MANAGEMENT RECOMMENDATIONS :__::__::__:
(96) REMARKS-1 :__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:
(97) REMARKS-2 :__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:
(98) REMARKS-3 :__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:

(99) LOCATION OF SPECIFIC DATA-1     :__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:
(100)LOCATION OF SPECIFIC DATA-2     :__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:__:
============================================================ FISH INFORMATION ============================================================
(101) FISH          (102)SAMP (103)SIZE (104)NUMBER  (105)REL     (106)     :: (101) FISH       (102)SAMP (103)SIZE (104)NUMBER  (105)REL   (106)
 SPECIES CODE        METHOD    RANGE     /100 FT      ABUND       STATUS    ::  SPECIES CODE     METHOD    RANGE     /100 FT      ABUND     STATUS
:__:__:__:__:__:      :__:      :__:     :__:__:__:    :__:       :__:__:   :: :__:__:__:__:__:   :__:      :__:     :__:__:__:   :__:      :__:__:
:__:__:__:__:__:      :__:      :__:     :__:__:__:    :__:       :__:__:   :: :__:__:__:__:__:   :__:      :__:     :__:__:__:   :__:      :__:__:
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:__:__:__:__:__:      :__:      :__:     :__:__:__:    :__:       :__:__:   :: :__:__:__:__:__:   :__:      :__:     :__:__:__:   :__:      :__:__:
:__:__:__:__:__:      :__:      :__:     :__:__:__:    :__:       :__:__:   :: :__:__:__:__:__:   :__:      :__:     :__:__:__:   :__:      :__:__:
```

APPLICATIONS

The following are hypothetical management problems or questions that might be answered using the data base. The list is not all inclusive, nor does it imply that some judgement and experience will not be necessary to interpret the data retrieved from the data base.

The examples are not intended to provide instructions in the ASPEN/2 Query commands which can be entered in a number of ways. Commands can be entered completely spelled out or using the short versions of the commands. The short version is used in all of the examples for sake of space. Element numbers are listed on page 1 of this guide, with detailed explainations on the pages indicated. These are the same as are shown on the Form 6602-9 used to input data. Therefore, in most cases,

```
     PRINT:(SECTION;TOWNSHIP;RANGE) FOR ALL
```

is equivalent to:

```
     P:(E16;E15;E14) FOR ALL
```

A Complete Set of ASPEN/2 Query Commands can be obtained from TEKTON SYSTEMS, 1420 Quail, Lakewood, CO 80215. Training in wildlife applications can be obtained from the Division of Resource Systems D-470.

1. --- A QUESTION ---

An Allotment Management Plan (AMP) is being developed for XXX allotment which is within a certain group of townships and ranges. What streams are expected to be impacted by a 4 pasture rest rotation system? What is the condition of these streams and the associated riparian habitat? What is the major cause of degradation in bank erosion for each stream and what are the limiting factors of the riparian habitat.

--- A COMMAND ---

```
PLF:E20;E21;E78;E77;E42;" " FOR E14=0340N;0350N AND E15=0510E
```

--- EXPECTED RESULTS ---

```
NAME OF WATER BODY               : JACK CREEK
SEGMENT CODE NUMBER              : OVERALL
OVERALL FISH HABITAT CONDITION   : POOR
BANK EROSION CAUSE               : LIVESTOCK
RIPARIAN LIMITING FACTORS        : GRAZING

NAME OF WATER BODY               : JAMES CREEK
SEGMENT CODE NUMBER              : OVERALL
OVERALL FISH HABITAT COND......
     etc.
```

2. --- A QUESTION ---

What streams are currently inhabited by a particular threatened species? What is the current habitat condition and the potential for improvement.

--- A COMMAND ---

```
PLF:E20;E21;E78;E84;E85;" " FOR E101=SACLHE   (Lahonton Cutthroat)
```

--- EXPECTED RESULTS ---

```
NAME OF WATER BODY                          : BEAVER CREEK
SEGMENT CODE NUMBER                         : OVERALL
OVERALL FISH HABITAT CONDITION              : FAIR
FISH HABITAT POTENTIAL                      : HIGH
FISH HABITAT IMPROVEMENT POTENTIAL          : MEDIUM

NAME OF WATER BODY                          : CHIMNEY CR
SEGMENT CODE NUMBER                         : OVERALL BELOW FS
OVERALL FISH HABITAT CONDITION              : POOR
FISH HABITAT POTE.......
     etc.
```

---

3. --- A QUESTION ---

What are the major causes of stream habitat and riparian vegetation degradation on certain stream segments?

--- A COMMAND ---

```
POFF PO=2 C:E80 FOR E20=SALMON FALLS CR C:E81 FOR R C:E82 FOR R
```

--- EXPECTED RESULTS ---

```
        FISH LIMITING FACTORS-1
 36:  SEDIMENTATION

        FISH LIMITING FACTORS-2
 29:  POOLS FEW IN NUMBER & SMALL IN SIZE
  7:  LACK OF SPAWNING GRAVEL

        FISH LIMITING FACTORS-3
  6:  LACK OF SPAWNING GRAVEL
 14:  LACK OF RIPARIAN VEGETATION COVER

        RIPARIAN LIMITING FACTORS
 13:  SCOUR
 23:  GRA....
                 etc.
```

4. --- A QUESTION ---What streams have cottonwood trees (POTR6) as either or sub-dominant tree species within the associated riparian system?

```
   --- A COMMAND ---
P:(E20;E21) FOR E54=POTR6 OR E55=POTR6
```

```
   --- EXPECTED RESULTS ---
NAME OF WATER         SEGMENT CODE
CAMP CR               OVERALL BELOW FS
HUMBOLT LOWER         BEOWAWE TO PALIS
HUMBOLT MID           CARLIN CANYON
HUMBOLT UPPER         N.F. CONFLUENCE
MARYS RIVER           16 MI BELOW FS
              etc.
```

---

5. --- A QUESTION ---
Is there a correlation between percent stream shade and livestock utilization? List all stream segments with percent shade and livestock utilization in order of the most percent shade to the lease percent shade.

```
   --- A COMMAND ---
DON PF:((1)E45;(1)E20;E21;E45;E46) FOR ALL DOFF
```

```
   --- EXPECTED RESULTS ---
NAME OF WATER       SEGMENT CODE NU   % SHADE    LIVESTOCK UTILIZATION
SHEEP CREEK         OVERALL              78      MODERATE
SF JAKE CREEK       OVERALL              71      MODERATE
SECRET CREEK        OVERALL              70      HEAVY
            etc.
```

---

6. --- A QUESTION ---
What streams supporting T&E species or priority species have high fish habitat improvement potential? Of those, what are the management recommendations suggested?

```
   --- A COMMAND ---
PF:((E20;E106;E93 TO E95)) FOR E85=HIGH AND NOT E106=U
```

```
   --- EXPECTED RESULTS ---
NAME OF WATER  STATUS    RECOMMENDATIONS-1   RECOMMENDATIONS-2 ....
BULL CAMP CR   PRIORITY  CONTROL GRAZING     DEVELOP POOLS
CAMP CREEK     PRIORITY  CONTROL GRAZING     DEVELOP POOLS
CHIMNEY CR     THREATEN  DEVELOP POOLS       CHANGE FLOW

          etc.
```

7. --- A QUESTION ---

What fishery and riparian habitat information exists for a certain section, township and range?

--- A COMMAND ---

```
P:(E20;E21) FOR E14=0350N AND E15=0510E AND E16=010
```

Note: An abbreviation can be made for any query which is used frequently. In this case an abbreviation could be created called LOCATION which would prompt the user to enter the Section, Township & Range at the proper time. The results would be the same.

```
DA:LOCATION=P:(E20;E21) FOR E14=?TWP AND E15=?RNG AND E16=?SEC
```

--- EXPECTED RESULTS ---

```
NAME OF WATER    SEGMENT CODE
LIL JACK CREEK   OVERALL
JACK CREEK       OVERALL
```

---

8. --- A QUESTION ---

How many streams in a certain basin or resource area have certain land use impacts and what are they?

--- A COMMAND ---

```
P:(E20;E87)FOR E22=SNAKE R
```

--- EXPECTED RESULTS ---

```
NAME OF WATER       TYPE IMPACT/DISTURBANCE
BRUNEAU R           NONE
COPPER CR           FACILITIES OPERATIONS
DOLLY CR            OTHER ANIMALS
```

---

9. --- A QUESTION ---

What streams that are now in poor or fair condition have a high potential for becomming rated high or medium?

--- A COMMAND ---

```
PF:(E78;E84;E85;E20;E21) FOR E78=POOR;FAIR AND E84=MEDIUM;HIGH
   AND E85=HIGH
```

--- EXPECTED RESULTS ---

```
OVERALL FISH   FISH HAB   FISH HAB
HAB CONDITION  POTENTIAL  IMP POT   NAME OF WATER      SEGMENT CODE
POOR           HIGH       HIGH      TROUT CR           OVERALL IN NV
POOR           HIGH       HIGH      TABOR CR           OVERALL
POOR           MEDIUM     HIGH      LITTLE PORTER CR   UPPER 5 MI
FAIR           HIGH       HIGH      MCCANN CR          UPPER 6 MI
      etc.
```

10. --- A QUESTION ---
What stream segments contain certain species?

--- A COMMAND ---

```
P:((E20;E21;E101;E108)) FOR ALL
```

Note: Common Name (E108) was not entered on the input form but the computer looked it up based on the entry in E101.

--- EXPECTED RESULTS ---

```
NAME OF WATER      SEGMENT CODE        SPECIES CODE   COMMON NAME
WILSON LIME CR     OVERALL BELOW FS                   TROUT RAINBOW
                                                      DACE SPECKLED

WILLOW CR UPPER    ABOVE RESERVOIR                    TROUT LAHONTON
                                                      SUCKER TAHOE
                                                      SHINER LAHONTAN R
                                                      DACE SPECKLED

WILLIAMS CANYON  ...........
                etc.
```

---

11. --- A QUESTION ---
How many miles of streams are in the Resource Area and what are their classifications.

--- A COMMAND ---

```
P:((E20;E26 TO E30)) FOR E7=48
```

--- EXPECTED RESULTS ---

```
NAME OF WATER     SEGMENT   BLM    OTHER     STATE    OTHER
                  LENGTH           FEDERAL
WILSON LIME CR     5.4      3.4     0.0       0.0      2.0
WILLOW CR          2.0      2.0     0.0       0.0      0.0
```

---

12. --- A QUESTION ---
Which streams provide habitat for T&E Aquatic species?

--- A COMMAND ---

```
P:(E20) FOR NOT E106=U;OT
```

--- EXPECTED RESULTS ---

```
NAME OF WATER
BEAR CR
BEAVER CR
BIG COTTONWOOD
BULL CAMP CR
```

13. --- A QUESTION ---

List all of the fish species in the Resource Area and the water bodies that they occupy.

--- A COMMAND ---

```
P:(E101;E108;E20)FOR FOR E7=48
```

--- EXPECTED RESULTS ---

```
SPECIES CODE  SPECIES NAME   NAME OF WATER
ACAL          CHISELMOUTH    LITTLE GOOSE CR
                             SALMON FALLS CR
                             SF OWYHEE RIVER

CAAR          SUCKER UTAH    RED COW CREEK
        etc.
```

---

14. --- A QUESTION ---

What is the most common limiting factor for streams in the Resource Area?

--- A COMMAND ---

```
C:E80 FOR E7=48 C:E81 FOR R C:E82 FOR R
```

--- EXPECTED RESULTS ---

```
    FISH LIMITING FACTORS-1
 39: SEDIMENTATION
182: POOLS FEW IN NUMBER & SMALL IN SIZE
  7: LACK OF SPAWNING GRAVEL

        etc.
```

FEEDBACK FOR UPDATES

If you have any comments, corrections, or things which you feel would make this handout more accurate or useable to the field biologists in their use of the Riparian/Aquatic Information Data Summary, please share them with us. List any comments or changes below, referring to the page and/or paragraph, and mail them to:

WILDLIFE USER REPRESENTATIVE
Denver Service Center (D-472)
Building 50, Denver Federal Center
Denver, Colorado 80225

FORM 6602-9
(AUGUST 1985)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RIPARIAN/AQUATIC INFORMATION DATA SUMMARY

(1) RECORD # (2) RECORD TYPE W 9 (3) ACTION A
(4) PAGE

(5) STATE (6) DISTRICT (7) RES AREA (8) PLN UNIT (9-10) COUNTY(S) (11) SPC MGT UNIT (12) UTM COORDINATES ◄ZONE► ◄—EASTING—► ◄—NORTHING—►

(13) MERIDIAN (14) TOWNSHIP (15) RANGE (16) SECTION (17) QUARTER (18) QUARTER/QUARTER

(19) WATER TYPE (20) NAME OF WATER BODY/RIPARIAN AREA (21) SEGMENT CODE NUMBER (22) BASIN (23) ADJACENT SWA NUMBER

(24) BEGINNING RIVER MILE . (25) ENDING RIVER MILE . (26) SEGMENT LENGTH . ◄— (27-30) NUMBER OF STREAM MILES BY OWNERSHIP —► BLM . OTHER FEDERAL . STATE . OTHER .

(31) STREAM ORDER (32) ANADROMOUS FISH STREAM DATE OF SUMMARIZED INFORMATION [YR/MO/DAY] (33) BEGINNING / / (34) ENDING / / (35) ADJACENT LANDFORM (36) KUCHLER'S ASSOCIATION

(37) PHYSIOGRAPHIC REGION (38) ELEVATION (39) COMPILED BY (40) AGENCY

RIPARIAN VEGETATION INFORMATION

(41) ACREAGE . (42) LIMITING FACTORS (43) IMPROVEMENT POTENTIAL (44) EXISTING TREND (45) % SHADING (46) LIVESTOCK UTILIZATION

Riparian Vegetation Structure Data

% HERBACEOUS HERB SPECIES % SHRUB SHRUB SPECIES % TREES TREE SPECIES % BARE GROUND

EXISTING ► (47) (48) DOMINANT (50) (51) DOMINANT (53) (54) DOMINANT (56)

(49) SUB-DOMINANT (52) SUB-DOMINANT (55) SUB-DOMINANT

POTENTIAL ► (57) (58) (59) (60)

SUMMARY INFORMATION

(61) RIPARIAN VEGETATION RATING
(62) FLOW PATTERNS RATING
(63) GRADIENT RATING
(64) TEMPERATURE RATING
(65) BANK STABILITY RATING
(66) CHANNEL STABILITY RATING
(67) POOL QUALITY & QUANTITY RATING
(68) RIFFLE/RAPIDS RATING
(69) BOTTOM MATERIAL RATING
(70) EMBEDDEDNESS
(71) SPAWNING AREA RATING

(72) STREAM STRUCTURE DIVERSITY RATING
(73) AVERAGE WATER DEPTH FT. .
(74) AVERAGE WIDTH .
(75) SURFACE ACRES .
(76) SOIL ERODABILITY
(77) BANK EROSION CAUSE
(78) OVERALL FISH HABITAT CONDITION
(79) FISH HABITAT CONDITION TREND
(80-82) FISH LIMITING FACTORS
(83) WATER QUALITY PROBLEMS
(84) FISH HABITAT POTENTIAL

(85) FISH HABITAT IMPROVEMENT POTENTIAL
(86) AVERAGE POOL VOLUME [CUBIC METERS]
(87) TYPE IMPACT/DISTURBANCE RIPARIAN ZONE
(88) YEAR LAST DISTURBED
(89) MILES ROAD IN RIPARIAN ZONE .
(90) MILES STREAM DISTURBED .
(91) MILES BUFFER STRIP ADJ TO ROAD .
(92) MILES BUFFER STRIP ADJ RIPARIAN ZONE .
(93-95) FISHERIES MANAGEMENT RECOMMENDATIONS

(96) REMARKS-1
(97) REMARKS-2
(98) REMARKS-3

(99) LOCATION OF SPECIFIC DATA-1
(100) LOCATION OF SPECIFIC DATA-2

FISH INFORMATION

(101) FISH SPECIES CODE	(102) SAMP METHOD	(103) SIZE RANGE	(104) NUMBER /100 FT	(105) REL ABUND	(106) STATUS	(101) FISH SPECIES CODE	(102) SAMP METHOD	(103) SIZE RANGE	(104) NUMBER /100 FT	(105) REL ABUND	(106) STATUS

40402935 ID: 8807376 HD221 .R57 1985 c.2

STREAM HABITAT FEATURES RATING

Feature	Excellent	Good	Fair	Poor
Riparian Vegetation (61)	Little or no disturbance of plant community. Succession progressing or stable. Abundance of both new and old plant or stable.	Succession progressing or stable. New and old growth common potential for increased plant density. Some patches of clipped vegetation. Seedstalks readily observable. Some woody plants hedged.	Noticeable disturbance. Medium to high successional availability. Most woody plants hedged. Grass clipped to ground in places. Fair possibility of riparian habitat regression.	Extreme disturbance. Large patches of bare soil. Grass with mown appearance. Little or no production of key plant species. Woody species hedged or boken. Riparian vegetation regressing or nearly so.
Flow Pattern (62)	Perennial stream, flooding rare, stable flow pattern.	Perennial stream moderate seasonal flow.	Intermittent stream, streambed dry during part of the year.	Ephemeral stream, flows only after heavy rain.
Gradient (63)	0 to 1%, Flat	1.0 to 2.5%, Moderate	2.5 to 5%, Steep	5% + very steep
Temperature (64)	Max Summer Temp 18 deg C (CW) or 27 deg C (WW). Min Winter Temp 7 deg C (CW) or 16 deg C (WW). No surface freezing.	Max Summer Temp 22 deg C (CW) or 30 deg C (WW). Min Winter Temp 5 deg C (CW) or 13 deg C (WW). Surface freezing rare.	Max Summer Temp 26 deg C (CW) or 33 deg C (WW). Min Winter Temp 1 deg C (CW) or 10 deg C (WW). Surface freezing common. Some anchor ice.	Max Summer Temp 30 deg C (CW) or 36 deg C (WW). Min Winter Temp 0 deg C (CW) or 7 deg C (WW). Extensive surface or anchor ice.
Bank Stability (65)	Bank undisturbed, firm, stabilized by roots, logs or rocks over 12".	Some bank erosion, roots, logs, rocks over 12" common.	Bank erosion common even at low flow, severe at high flow. Some logs, roots, rocks 6" + present.	Extensive erosion, common at low flow, severe at high flow. Little or no rock, log, or vegetation protection.
Channel Stability (66)	Channel well defined, less than 5% of channel affected by scouring or deposition.	Most of channel well defined. Some flooding 5 to 30% affected by scouring or deposition. Some bar formation.	Main channel defined; some channel spreading 30 to 70% affected by scouring or deposition. Pools silted.	Channel poorly defined, unstable. Over 70% bed actively scouring or depositing. Channel, pools shallow. Extensive flats.
Pool Quantity and Quality (67)	Over 25% of channel is pool; length or width 2X average stream width; depth over 20% average stream width; cover abundant.	13 to 25% of channel is pool; length or width less than 2X average stream width; depth 10 to 20% of avg stream width; cover ample.	5 to 12% of channel is pool; length or width equal to avg stream width; depth 5 to 10% of avg stream width; some cover.	Less than 5% of channel is pool. Greatest length or width, depth less than 5% of avg stream width. Little or no cover.
Riffle/Rapids (68)	Stream 45 to 55% riffle or rapids.	Stream 25 to 45% or 55 to 75% riffle or rapids.	Stream less than 25% riffle or rapid.	Stream greater than 75% riffle or rapid.
Bottom Material (69)	Bed over 80% rocky material 2" or more. Sediments only in back areas, deep pools.	Bed material 40 to 75% rocky material over 2". Sediments in quiet areas, abundant in pools.	Bed material 15 to 40% rocky material over 2". Sediments cover bed in most quiet areas.	Bed material over 2" less than 15%. Bottom covered with sediments in all but fast water.
Embeddedness (70)	Not embedded	0 to 25% lightly embedded	25 to 75% Moderately embedded	75 to 100% Highly embedded
Spawning Area (71)	Over 25% of channel usable for spawning. No migration blocks.	13 to 25% of channel usable for spawning. No migration blocks, or only at extreme flows.	5 to 12% of channel usable for spawning. Migration open at least part of time.	Under 5% of channel usable for spawning. Migration routes often obstructed.
Stream Structure Diversity (72)	Tree limbs and boles, large boulders common, evenly distributed. Diversity of habitats, cover abundant, stable.	Tree limbs, boles, boulders and large rocks fairly common, usually evenly distributed, stable. Cover adequate; several habitat types.	Some limbs, boles, boulders, large rock; uneven distribution. Few different habitats; limited cover. Structure often shifts.	Woody or rock structure limited or absent, distribution random. Unstable. Little or no cover. Little or no habitat diversity.

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FORM 6602-9a
(AUGUST 1985)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RIPARIAN/AQUATIC
INFORMATION DATA SUMMARY INSTRUCTIONS

General Instructions: Completed by field biologist and sent to Division of Resource Systems (D-470) Denver Service Center for editing and preparation of data base for field office use.

IMPORTANT NOTICE: All entries must be clear and legible and are the only authorized codes on this form. After the Fisheries Biologist completes the form, the data can be key-entered into the computer system. The numbers in ( ) on the form refer to the instructions below. All location information is related to the downstream beginning of the stream segment. Input on this form can be for lakes or stream segments, specify which in (19).

Item

1 **RECORD NUMBER** = Entered automatically by edit program.

2 **RECORD TYPE** = Will be W9 for these forms.

3 **ACTION CODE** = Will be A = Add for These Forms.

4 **PAGE NUMBER** = Number each page submitted consecutively.

5,6,7,8 **STATE, DISTRICT, RESOURCE AREA, PLANNING UNIT** = Enter proper code from Data Element (D.E.) 0003. Planning Unit is optional for those states no longer using this designation, enter 00.

9,10 **COUNTY(s)** = Enter proper code from D.E. 0002 that indicates the County involved (or Counties where the County line is the stream).

11 **SPECIAL MANAGEMENT UNIT** = Use of this space is OPTIONAL locally, for instance you may wish to enter allotment/pasture, timber sale unit, or habitat management area (15 letters or numbers). D.E. 5370

12 **UTM COORDINATES** = Use of this space is OPTIONAL, however its use will permit this data to be coordinated with Geographic Information Systems without the necessity of digitizing each stream segment. Universal Transverse Mercator Codes are made up of 2 numbers for the zone, 6 numbers for easting and, 7 characters for northing. If not used, leave blank, do not insert any other numbers or letters. D.E. 7515

13 **MERIDIAN** = Enter appropriate code from D.E. 1703.

14 **TOWNSHIP** = Enter 3 character whole township number followed by one character code indicating a partial or whole township, followed by either an N or S, indicating direction from baseline. See D.E. 1695 for additional information and partial township codes. Example 0430N = T43N.

15 **RANGE** = Same as for township. See D.E. 1699 for additional information. Example 0330E = R33E.

16 **SECTION** = Enter section number (usually 1-36) as 001 or 036. See D.E. 2506

17,18 **QUARTER, QUARTER/QUARTER** = Enter either NE, SE, SW, or NW. See D.E. 6565

19 **WATER TYPE** = Enter L = Lake or Pond; R = Reservoir; P = Perennial Stream; I = Intermittent Stream; E = Ephemeral Stream D.E. 5368

20 **NAME OF WATER BODY/RIPARIAN AREA** = Enter up to 15 characters for name of lake, stream or riparian area. D.E. 4601

21 **SEGMENT CODE NUMBER** = Local entry OPTIONAL. Use local segment identification systems (16 char) D.E. 5369

22 **BASIN** = Enter 1st 8 characters of major river basin D.E. 6931

23 **ADJACENT SWA NUMBER** = Enter the number for the mapping unit if ESI or IHICS inventories have been conducted on the same area. The same SWA Number must be used to represent the same map area. See D.E. 3507

24,25 **BEGINNING AND ENDING RIVER MILES** = beginning river mile D.E. 3484 & ending river mile D.E. 3483 from the mouth of stream segment. (outlet for lakes)

26 **SEGMENT LENGTH** = Subtract (24) from (25)

27-30 **NUMBER OF STREAM MILES BY OWNERSHIP** = Enter number of stream miles by ownership type. Enter Zero if none for any ownership.(27-29) should total (24).

31 **STREAM ORDER** = Enter stream order from codes in D.E. 5335 (omit for lakes).

32 **ANADROMOUS FISH STREAM** = Enter Y(Yes) or N(No) if the stream or lake now has or potentially will support anadromous fish species. D.E. 5367

33,34 **DATE OF SUMMARIZED INFORMATION** = Enter year, month and day that the summarized data represents. Data may have come from a number of sources over a period of time. Enter Nov. 25, 1983 as 831125. D.E. 0213

35 **ADJACENT LANDFORM** = Enter 3 character code for landform from D.E. 5132.

36 **ASSOCIATION** = Enter 3 digit code for Kuchler's Association from D.E. 6536 and map.

37 **PHYSIOGRAPHIC REGION** = Enter 2 digit code from D.E. 6538 and map.

38 **ELEVATION** = Enter Elevation above Sea Level for the lake or the beginning of the stream segment. D.E. 0431

39 **DATA COMPILED BY** = Enter name of person compiling form D.E. 2464 (17 char)

40 **AGENCY OF COMPILER** = Enter from the following codes; B = BLM; F = USFS; W = USF&W; S = State; U = University; R = Researcher; C = Contractor; O = Other. D.E. 5365

RIPARIAN VEGETATION INFORMATION

41 **ACREAGE** = Enter the acreage of the associated riparian vegetation, this will usually be acreage of your SWA (23) or your mapping unit. D.E. 3138.

42 **LIMITING FACTORS** = Choose code from D.E. 5364 which best describes the limiting factor for the riparian vegetation.

43 **IMPROVEMENT POTENTIAL** = Choose a code from D.E. 5363 which best describes the potential for improvement of the riparian vegetation.

44 **EXISTING TREND** = Estimated existing trend of riparian vegetation. U = Upward, D = Downward, S = Stable. D.E. 2626

45 **PERCENT STREAM SHADING** = Enter estimated percent the stream is shaded at noon on each day. D.E. 7096

46 **LIVESTOCK UTILIZATION** = Enter code for estimated livestock utilization of the riparian vegetation from the viewpoint of the biologist and species using the area. Use D.E. 3832

The following fields (47) - (56) refer to the existing vegetation structure, while (57) - (60) refer to the potential vegetation structure as estimated by the biologist

47 **EXISTING PERCENT HERBACEOUS** = Enter estimated percent of herbaceous plants covering the ground. D.E. 2628

48,49 **DOMINANT AND SUB-DOMINANT HERB SPECIES** = Enter the proper plant codes from D.E. 2646 for the dominant and sub-dominant herbaceous species.

50 **EXISTING PERCENT SHRUB** = Enter estimated percent of shrubs covering the ground. D.E. 2628

51,52 **DOMINANT AND SUB-DOMINANT SHRUB SPECIES** = Enter the proper plant codes from D.E. 2646 for the dominant and sub-dominant shrub species.

53 **EXISTING PERCENT TREES** = Enter the estimated percent trees covering the ground. D.E. 2628

54,55 **DOMINANT AND SUB-DOMINANT TREE SPECIES** = Enter the proper plant codes from D.E. 2646 for the dominant and sub-dominant tree species.

56 **EXISTING PERCENT ROCK AND BARE GROUND** = Enter estimated % of mapping unit covered by rock and bare ground. D.E. 0754

Note: (47) + (50) + (53) + (55) should equal 100%
also (57) + (58) + (59) + (60) should equal 100%

57 **POTENTIAL PERCENT HERBACEOUS** = D.E. 2628
58 **POTENTIAL PERCENT SHRUB** = D.E. 2628
59 **POTENTIAL PERCENT TREES** = D.E. 2628
60 **POTENTIAL PERCENT ROCK AND BARE GROUND** = D.E. 0754

SUMMARY INFORMATION

61-72 **SUMMARY RATINGS** from rating sheet D.E. 5372, 5373, 5390, 5374, 5389, 5375, 5391, 5392, 5393, 5511, 5509, 5510.

73 **AVERAGE WATER DEPTH** = Enter average depth of lake or stream in feet and tenths of feet. D.E. 7074

74 **AVERAGE STREAM WIDTH** = Enter the average width of the stream in feet and tenths of feet. (omit for lakes) D.E. 7043

75 **SURFACE ACRES** = Calculate the surface acres of water. (May be omitted for streams.) D.E. 5404

76 **SOIL ERODABILITY** = Enter estimated rating based on visual observation by biologist or on other information if available. (1) = Slight (2) = Moderate (3) = Severe D.E. 4515

77 **BANK EROSION CAUSE** = Select the major cause of bank erosion from D.E. 5362.

78 **OVERALL FISH HABITAT CONDITION** = Select proper code from D.E. 2654.

79 **FISH HABITAT CONDITION TREND** = Enter estimated trend U = Up, D = Down, S = Stable, X = Not Known. D.E. 5361

80-82 **FISH LIMITING FACTORS** = Select the 3 most important limiting factors from the list in D.E. 5360, place the most important (if it can be ranked) in the left box and the next (if any) in the middle box, etc.

83 **WATER QUALITY PROBLEMS** = Enter the most limiting water quality problem from codes in D.E. 5359.

84 **FISH HABITAT POTENTIAL** = List your estimate of the potential of the lake or stream segment for the production of fish. Select the proper code from D.E. 5358.

85 **FISH HABITAT IMPROVEMENT POTENTIAL** = From the codes in D.E. 5309 evaluate the improvement potential for the segment

86 **AVERAGE POOL VOLUME** = Enter average pool volume in cubic meters for the pools in the stream segment. (Omit for lakes.) D.E. 5308

87 **TYPE IMPACT/DISTURBANCE IN RIPARIAN ZONE** = From the codes in D.E. 6671 select the most prevalent impact/disturbance.

88 **YEAR LAST DISTURBED** = If (87) shows that the riparian area has been logged, mined or otherwise disturbed enter the last two digits of the year when it was last disturbed. D.E. 0204

89 **MILES OF ROAD IN RIPARIAN ZONE** = Enter the number of miles (to nearest 1/10) of road that are within the SWA (# 23). This would include the length of road that crosses the stream as well as that which might run parallel to the lake or stream in the riparian zone. D.E. 3668

90 **MILES OF STREAM DISTURBED** = Enter the miles (to nearest 1/10) of the stream segment that the riparian area has been disturbed, (87 or 88). Enter shoreline miles for lakes. D.E. 3668

91 **MILES OF BUFFER STRIP ADJACENT TO ROAD** = Enter the number of miles (to nearest 1/10) of the buffer strip within the SWA (# 23). D.E. 5306

92 **MILES OF BUFFER STRIP ADJACENT TO THE RIPARIAN ZONE** = Enter the number of miles (to nearest 1/10) of buffer strip in the SWA (# 23). D.E. 5305

93-95 **FISHERIES MANAGEMENT RECOMMENDATIONS** = select from codes in D.E. 5371, the 3 most important recommendations for fisheries management in this segment. If all 3 are not used, enter X in unused recommendations.

96-98 **REMARKS** = Do not exceed the 40 characters provided on each line. These are remarks about the water body/riparian zone or SWA (# 23) that is being inventoried. D.E. 2663

99-100 **LOCATION OF SPECIFIC INFORMATION** = This form only provides summary information for entry into the computer. List here the name and address where the field data, samples, rating sheets, maps, etc. are kept that provided data for this summary report. Be specific, state file if possible. D.E. 2663

FISH INFORMATION

101 **FISH SPECIES CODE** = Enter code from D.E. 6803 for fish species. List up to 10 most important fish.

102 **SAMPLING METHOD** = Select code from D.E. 6804 which reflects the most prevalent method(s) for gathering the fisheries occurrence data.

103 **SIZE RANGE** = Enter the 1 digit code from D.E. 5301 that represents the average size of the fish species. More than one entry can be made if significant differences exist.

104 **NUMBER/100 FT** = List the average number of fish of the species per 100 feet in this stream segment. D.E. 5300

105 **RELATIVE ABUNDANCE** = Estimate the relative abundance of this species in this lake or stream segment, use the codes found in D.E. 6528.

106 **STATUS** = Enter from codes in D.E. 6530 to indicate the official designated status of the species. Species which are not designated in a special manner are coded OT = Other.

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